

PATENT CLAIMS

1. Expander roller with a tubular roller sleeve (2) adjustable in its curvature that is formed of one-piece tubes made of reinforced plastic/composite material, and that is mounted on a non-rotatable central area by means of bearings (13),

characterized in that

the central area is a deformable axis (1), and that the outer surfaces of the bearings (13) rest against the inner wall of the roller sleeve (2) or of one of the outer ring shell bushings (3) resting against its inner wall, and their inner surfaces rest on the upper surface of the deformable axis (1) or of a ring shell bushing (4) firmly surrounding it.

2. Expander roller as in Claim 1, characterized in that the plastic/composite material is reinforced with glass or carbon fibers.

3. Expander roller as in Claim 1 or 2, characterized in that the outer ring shell bushings (3) are wider than the pertinent bearings (13).

4. Expander roller as in at least one of Claims 1 through 3, characterized in that the inner ring shell bushings (4) are wider than the pertinent bearings (13).

5. Expander roller as in at least one of Claims 1 through 4, characterized in that the bearings are roller bearings.
6. Expander roller as in Claim 5, characterized in that the roller bearings are ball bearings.
7. Expander roller as in at least one of Claims 1 through 6, characterized in that the axis (1) is deformable within the roller sleeve (2) along its entire length, and that the curvature of the axis (1) is transferred to the tubular roller sleeve (2) via the bearings (13).